

- 1 1. A telescope comprising:
2 a vision lens having a vision axis and comprising a first surface for placement
3 substantially in front of an eye of a user; and
4 a plurality of optical elements defining an optical path for viewing an object in
5 front of said first surface, at least one of said plurality of optical elements being
6 positioned such that at least a portion of said optical path is located within said
7 vision lens in a plane substantially orthogonal to said vision axis.
- 1 2. The telescope of claim 1 wherein said vision lens further comprises a second
2 surface, said at least one of said plurality of optical elements being positioned
3 substantially between said first surface and said second surface.
- 1 3. The telescope of claim 1 wherein said eye simultaneously views said object
2 through said vision lens and said plurality of optical elements.
- 1 4. The telescope of claim 1 wherein said vision lens is a spectacle lens.
- 1 5. The telescope of claim 4 further comprising an eyeglass frame adapted to retain
2 said spectacle lens.
- 1 6. The telescope of claim 1 wherein at least a portion of one of said plurality of
2 optical elements is embedded in said vision lens.
- 1 7. The telescope of claim 1 wherein one of said plurality of optical elements is a
2 lens.
- 1 8. The telescope of claim 7 wherein said lens is convex.
- 1 9. The telescope of claim 7 wherein said lens is concave.
- 1 10. The telescope of claim 1 wherein at least one of said plurality of optical elements
2 is a mirror.

- 1 11. The telescope of claim 10 wherein said mirror is turned at about 45 degrees to
2 said vision axis.
- 1 12. The telescope of claim 10 wherein said mirror is planar.
- 1 13. The telescope of claim 10 wherein said mirror is curved.
- 1 14. The telescope of claim 1 wherein at least one of said plurality of optical elements
2 is a holographic element.
- 1 15. The telescope of claim 1 wherein said plurality of optical elements comprises an
2 objective lens, an ocular lens, and a plurality of planar mirrors, said plurality of
3 planar mirrors adapted to direct said optical path between said objective lens and
4 said ocular lens.
- 1 16. The telescope of claim 15 wherein said objective lens has an objective lens axis,
2 said objective lens axis being substantially parallel to said vision axis.
- 1 17. The telescope of claim 16 wherein at least one of said plurality of said planar
2 mirrors is turned at about forty-five degrees to said objective lens axis.
- 1 18. The telescope of claim 15 wherein said ocular lens has an ocular lens axis, said
2 ocular lens axis being substantially parallel to said vision axis.
- 1 19. The telescope of claim 18 wherein at least one of said plurality of said planar
2 mirrors is turned at about forty-five degrees to said ocular lens axis.
- 1 20. The telescope of claim 15 wherein said objective lens and said ocular lens are
2 chromatically corrected.
- 1 21. The telescope of claim 15 wherein said ocular lens is a negative or concave lens.
- 1 22. The telescope of claim 15 wherein said objective lens is a positive or convex
2 lens.
- 1 23. The telescope of claim 15 wherein said ocular lens is a positive or convex lens.

2 24. The telescope of claim 15 wherein said objective lens is a negative or concave
3 lens.

1 25. The telescope of claim 1 wherein said telescope comprises a Galilean type
2 telescope.

1 26. The telescope of claim 1 wherein said telescope comprises a Keplerian type
2 telescope.

1 27. The telescope of claim 15 wherein at least one of said plurality of planar mirrors
2 is located completely within said lens.

1 28. The telescope of claim 15 wherein said objective lens is positioned coincident to
2 said lens.

1 29. The telescope of claim 15 wherein said ocular lens is positioned coincident to said
2 lens.

1 30. The telescope of claim 15 wherein said ocular lens is mounted completely behind
2 said lens.

1 31. A vision enhancing system comprising:

2 a spectacle lens having a vision axis and comprising a first surface for placement
3 substantially in front of an eye of a user; and

4 a telescope in communication with said spectacle lens for viewing an object in
5 front of said first surface; said telescope comprising:

an objective lens having an objective lens axis, said objective lens axis
being substantially parallel to said vision axis;

8 an ocular lens in optical communication with said objective lens and
9 having an ocular lens axis, said ocular lens axis being substantially parallel
0 to said vision axis; and

- 1 42. The vision enhancing system of claim 31 wherein said objective lens and said
2 ocular lens are chromatically corrected.
- 1 43. The vision enhancing system of claim 31 wherein said ocular lens is a negative or
2 concave lens and said objective lens is a positive or convex lens.
- 1 44. The vision enhancing system of claim 31 wherein said telescope comprises a
2 Galilean type telescope.
- 1 45. The vision enhancing system of claim 31 wherein said telescope comprises a
2 Keplerian type telescope.
- 1 46. The vision enhancing system of claim 38 wherein said planar mirror is located
2 completely within said spectacle lens.
- 1 47. The vision enhancing system of claim 31 wherein said objective lens is positioned
2 coincident to said spectacle lens.
- 1 48. The vision enhancing system of claim 31 wherein said ocular lens is positioned
2 coincident to said spectacle lens.
- 1 49. The vision enhancing system of claim 31 wherein said ocular lens is mounted
2 completely behind said spectacle lens.
- 1 50. A method for constructing a telescope comprising:
2 mounting a lens having a vision axis and comprising a first surface to a frame
3 such that said lens is positioned substantially in front of an eye of a user; and
4 arranging a plurality of optical elements relative to said lens, said plurality of
5 optical elements defining an optical path for viewing an object in front of said
6 first surface, at least one of said plurality of optical elements being positioned
7 such that at least a portion of said optical path is located within said lens in a
8 plane substantially orthogonal to said vision axis.

- 1 51. The method of claim 50 wherein said step of arranging said plurality of optical
2 elements comprises placing an objective lens in optical communication with said
3 lens.
- 1 52. The method of claim 51 wherein said objective lens is a positive or convex lens.
- 1 53. The method of claim 51 wherein said objective lens is a negative or concave lens.
- 1 54. The method of claim 50 wherein said step of arranging said plurality of optical
2 elements comprises placing an ocular lens in optical communication with said
3 lens.
- 1 55. The method of claim 54 wherein said ocular lens is a negative or concave lens.
- 1 56. The method of claim 54 wherein said ocular lens is a positive or convex lens.
- 1 57. The method of claim 50 wherein said step of arranging said plurality of optical
2 elements comprises placing at least one holographic element in optical
3 communication with said lens.
- 1 58. The method of claim 50 wherein said plurality of optical elements comprises an
2 objective lens, an ocular lens, and a plurality of planar mirrors, said plurality of
3 planar mirrors adapted to direct said optical path between said objective lens and
4 said ocular lens.
- 1 59. The method of claim 50 wherein said step of arranging a plurality of optical
2 elements comprises creating a Galilean telescope.
- 1 60. The method of claim 50 wherein said step of arranging a plurality of optical
2 elements comprises creating a Keplerian telescope.